

# Forcing The Body to Use More Energy By Increased Detoxification Is Not A Good Idea

JB bartoll.se/2024/11/protein-or-toxic-load-metabolism

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Today we return to T-Nation and their clueless and protein-obsessed writer Chris Shugart, a guy I've had to correct more times than I care to remember.

This time he's once again raving about the alleged metabolic/thermogenic effects of protein, which in reality are almost negligible. We already know that protein is used for several processes in the body, processes that require energy — so about 20 to 30 % of the energy content in protein is used up during digestion, processing, and to cover for all these processes it is involved in. In contrast, consuming toxic carbohydrates use 5 to 10% of its energy content to be digested and to normalize blood glucose levels. So, let's see what Chris has found and made a mess of this time.

*"If I were given a million-dollar advance to write a diet book, I could sum it up in one sentence:*

*Eat about a gram of protein per pound of body weight."*

Yeah, that's because you Chris have no clue about how the human body works, as you obviously never have looked at a paper within physiology, biology, microbiology, or biochemistry.

Here's a better summary in one single sentence, "*Eat according to your carnivorous species and utilize days of fasting for fat loss.*" That is the single best approach there is, period.

*"The big question is, "Why does that work?" You might think it has something to do with satiety or protein's greater thermic effect. You wouldn't be wrong, but there's more to the protein story. A fascinating study gives us another chapter."*

Nope. Satiety from protein is temporary, what governs hunger and cravings is your nutritional status, whether you have nutrient deficiencies or not. The thermic effect is abysmal in the greater scheme as it levels off once you have consumed what the body needs for its processes and building/repair. Any excess protein will either be stored as glycogen or excreted. So, if you get enough protein, adding more will do nothing for your metabolism or energy expenditure. And I highly doubt that the study you're going to present to us is "fascinating," not unless you also find a dirty latrine or a pile of dog shit "fascinating."

In biology and physiology, **hunger and cravings are natural responses to nutrient deficiencies, particularly from micronutrients and animal fats.** When the body lacks essential nutrients, it triggers a physiological response to motivate the individual to consume more food to restore balance. This response is designed to ensure life-sustaining processes continue uninterrupted.

According to biology, physiology, and biochemistry, **the thermic effect of protein increases up to a certain saturation point. This point is determined by the body's current needs.** Once this saturation point is reached, any additional protein consumed will not contribute to the thermogenic effect. Instead, excess protein will be either converted to glycogen or excreted.

## The Study: Locked in a Room for 32 Hours

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*“Researchers recruited 43 healthy men and women and locked them in a weird room for 32 hours... twice.”*

Weird, you say. Also, it would be nice to get a definition of “healthy.” Did they follow our natural species-appropriate diet of solely animal-based foods? I highly doubt it, and if not, they were not healthy by real-world definitions.

*“The room is called a whole-body calorimetry unit. This chamber is like a big machine that measures energy expenditure. This, along with some other sci-fi gadgets and tests, allowed the researchers to see the difference between calorie intake and expenditure (energy balance). They also looked at fat balance: dietary fat consumed, and dietary fat burned for energy.”*

Well, considering that they use “calories” as a measuring unit, a definition that comes from burning food stuff and noticing an increase in temperature of a container of water, it’s extremely flawed from the start. Remember, our body does not work like a calorimeter, we absorb nutrients that are used in chemical processes, not nutrients that immediately are burned to create heat to warm the water inside of us. Ridiculous.

In summary, metabolic chambers, despite their ability to measure heat production, do not provide a direct insight into the body's energy expenditure due to the flawed concept of calories. The body's energy metabolism is a complex process involving chemical energy and hormonal regulation, which cannot be accurately captured by caloric measurements. A more nuanced understanding of energy metabolism is necessary to accurately estimate energy expenditure and develop effective strategies for maintaining energy balance and overall health.

### In Summary

In physiology, biology, and biochemistry, calories are a measurement of heat, but this concept is irrelevant for the human body, which recognizes and metabolizes nutrients as sources of chemical energy, not heat.

But, let's play along and see what they think they discovered.

*"Group 1: Normal Protein Control Diet – This group got three meals and two snacks on the first day, slept in the weird calorie room, and had breakfast on the second day. All of these were pretty standard whole-food meals. They consumed about 2100 calories, with 83 grams coming from protein."*

Looking at the actual study, this group was fed a typical North American diet consisting of "standard food items" amounting to an extremely unhealthy 55% carbohydrates, 30% fat, and only 15% protein. As the authors did not mention what food they consumed other than "standard food items," we have to conclude that most of the foods were plant-based and processed, as in the unhealthiest crap you can consume. Extremely retarded approach. So, let's see what the second group got...

*"Group 2: High Protein Diet – This group also consumed 2100 calories divided over several meals, but their diets contained 211 grams of protein. That sounds good, but their "meals" consisted of soy protein powder and olive oil blended into low-fat milk. Gross!"*

This group's macronutrient ratios changed to 35% carbohydrates, 40% protein, and 25% fat. They reduced the carbs by 20% and the fat by 5% and replaced that with extremely toxic soy protein, which is a very low quality protein source. They also added "low-fat milk" which is pasteurized and homogenized rubbish, equivalent to water — a watery substance that they fortify with extremely toxic artificial vitamins and minerals. And of course, olive oil is both rancid and contains very harmful unsaturated fats, not suitable for human consumption.

The weird thing is that the authors changed the entire food selection for this group, and I quote, “the HP-TDR diet consisted of a soy-protein nutritional supplement mixed with olive oil and low-fat milk (1% fat) for the main meals and with olive oil and apple juice for the snacks, per label instructions.”

The CON diet was comprised of standard food items and the HP-TDR diet consisted of a soy-protein nutritional supplement (Almased®, Almased USA) mixed with olive oil and low-fat milk (1% fat) for the main meals and with olive oil and apple juice for the snacks, per label instructions (21).

This is actually worse than group 1. Toxic soy mixed with toxic olive oil for three meals, and then more toxic olive oil and a liver-killer sugary juice for two meals?! Crazy, just crazy!

And this shows the complete lack of understanding of human nutrition, of physiology, biology, and biochemistry. They do not understand the difference between organic and bioavailable nutrients found only in animal-based foods or that of inorganic and non-bioavailable nutrients as found in plants. Nor do they understand the toxic load from converting a small fraction of these inorganic nutrients to something the body might be able to use, or the hundreds of other toxins present in plant-derived foods.

With these two diets, only those who got a little bit of animal-based foods will actually get any usable nutrition, which totally excludes the high protein group (HP-TDR.)

So, the most important part in how their bodies would react comes down to the toxic load, how “healthy” they actually are, as in how well they can detoxify, followed by their ability to actually get some usable nutrients from the extremely toxic slave garbage they were fed.

The extremely lacking knowledge and understanding of human physiology and nutrition is embarrassing.

“Now, 2100 calories was the participants’ maintenance intakes, which shouldn’t cause weight gain or loss. Both groups walked on a treadmill for 40 minutes and then just sat around. A few weeks later, they switched groups and did it again (a crossover design study). And remember, they consumed the same number of daily calories in both groups. Only protein intake differed.”

Again, “calories” are irreverent, only nutrients count. And I doubt that all 43 participants, both men and women, had a perfect “2100 calorie maintenance.” Still, it doesn’t matter much. And to be clear, they were in that room following the retarded protocol for 32 hours. That was it. Then a few weeks later, they repeated the same experiment but switched the groups around.

And no, Chris, you dimwit, it was not “only protein” that differed, as their diets were completely different. All important nutrients differed in quantities, and that is crucial to understand.

In fact, here’s a simple and dumbed-down nutrient content profile provided by the authors of the study.

	<b>HP-TDR</b>	<b>CON</b>
Energy, kcal/d	2129 ± 241	2128 ± 241
Protein		
% energy	39.9 ± 0.3	15.3 ± 0.3
g/d	211 ± 24	83 ± 9
Fat		
% energy	24.9 ± 0.3	30.2 ± 0.3
g/d	58 ± 6	72 ± 8
Carbohydrate		
% energy	35.2 ± 0.3	54.4 ± 0.4
g/d	186 ± 21	295 ± 34
Sugars, g/d	179 ± 21	92 ± 12
Fiber, g/d	4 ± 0	30 ± 3
Saturated fat, g/d	12 ± 1	17 ± 3
Monounsaturated fat, g/d	35 ± 3	31 ± 4
Polyunsaturated fat, g/d	5 ± 0	17 ± 2
Cholesterol, mg/d	38 ± 9	107 ± 39

As you can see, control group 1 (CON) got 295 grams of carbohydrates, of which 92 grams were considered as “sugars.” Meanwhile the “high protein group” (HP-TDR) got 186 grams of carbohydrates, of which almost all were sugars, as in 179 grams, and that was due to the apple juice, so most of that was extremely toxic fructose, really taxing their livers.

Also CON got a bit more healthy saturated fat with 17 grams compared to 12 grams in HP-TDR. However, CON also got a healthy 107 mg of life-sustaining cholesterol, while HP-TDR only got a measly vegan-like 38 mg. Remember, saturated fats, and especially cholesterol are needed for all cellular repair and healing within the body, and if not sufficient from the diet, our body will try to manufacture enough cholesterol on its own — a costly process.

So, the high-protein group (HP-TDR) got tons of toxic soy protein and olive oil, a buckload of toxic fructose, and way too little cholesterol and saturated fats, really stressing the hell out of the body.

## What Happened?

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*“The high-protein eaters burned around 80 calories per day more compared to the average-protein eaters – 4% more calories.”*

That is very little, and only a tiny bit of that was from the thermogenic effect of protein, whatever they could actually break down and absorb from the toxic soy. However, the majority of that energy increase was from the extreme toxic load, especially on the liver from the fructose — and also forcing the body to produce cholesterol as the diet was extremely deficient.

According to biology, physiology, and biochemistry, **the body spends a significant amount of energy on processing inorganic compounds.**

This process involves breaking down these compounds, converting them into useful substances, expelling the remaining toxic inorganic compounds, and detoxifying from toxins.

In summary, when the liver is oversaturated with fructose, **it expends a significant amount of energy to convert it to glucose or store it as glycogen.** This energy expenditure can have negative consequences, including insulin resistance, increased lipogenesis, and mitochondrial dysfunction, highlighting the importance of maintaining a balanced diet and avoiding excessive fructose consumption.

When the body does not obtain sufficient cholesterol through dietary intake, it resorts to endogenous production, a process that is both energetically expensive and vital for maintaining cellular functions.

Also, the 4% energy difference is irrelevant, as following such an retarded diet as the HP-TDR group was consuming would lead to severe health problems and nutrient deficiencies really quickly, rendering it totally useless. So, forget about the 80 calories or the 4% as this setup was totally different from simply adding more protein to your current diet — even more so if you already consume more protein than the CON group's measly 83 grams a day.

A real study would have used a strict carnivorous diet and simply had more meat, and leaner cuts from the same animal, and perhaps a few more eggs for the HP-TDR group while reducing some of the fats.

Or, they would have used a strict carnivore diet where they removed some fatty meat from the HP-TDR group and added in some isolated and/or hydrolyzed protein powder (88-92%) to see if any metabolic differences would occur outside of the thermic effect.

But even then, by reducing the fatty cuts of meat, or other fat sources, such as egg yolks, you would reduce some essential nutrients for the HP-TDR group, so you would have to be above “maintenance” (energy and nutrient intake) and make sure that both groups got more essential nutrients than the body could use.

*“The high-protein eaters even burned 17 more calories while sleeping than the normal-protein eaters.”*

Likely due to the liver detoxing that fructose and the body struggling to produce sufficient amounts of cholesterol. Remember, most of our detoxing happens when we are in a fasted state, and these poor fools in this study got five meals a day, so they were only in a fasted state in the later part of their sleep.

## Detoxification

When we sleep, **our body's natural detoxification processes are amplified.**

The lymphatic system, responsible for removing toxins and waste products, becomes more active during sleep. This allows for the efficient removal of metabolic byproducts, such as urea, creatinine, and other waste materials, which can accumulate during the day. Additionally, the liver's detoxification pathways, including glutathione production and conjugation reactions, are also enhanced during sleep.



*“On the second day of the diet, both groups had breakfast, either a modest-protein whole-food meal or a high-protein shake. The researchers measured energy expenditure during their remaining six hours in the whole-body calorimetry unit. The normal-protein eaters burned 75 calories. The high-protein eaters burned 100 calories.”*

Yes, it's not that the protein they managed to absorb from the soy turned up their metabolism, although there was a thermic effect and a possible increase in protein turnover, it's more likely that the toxic load and the cumbersome breakdown and conversion of the inorganic proteins required quite a lot of energy, not to mention the toxic load on the organs. So, how much was actually the result of real pure protein metabolism? Likely not much at all, and from these figures we will never know, as the researchers were so frikkin' stupid in their design of the study. Instead, it is much more likely that most of that spent energy was from breaking down the food, converting the little the body could absorb, and especially from detoxing and expelling all the rest, including all plant toxins.

*“Regarding the fat balance data, the high-protein diet lead to a negative fat balance (they oxidized more dietary fat). The normal-protein diet lead to a neutral fat balance.”*

Of course, the CON group got more carbohydrates, and especially starches that flooded the blood with glucose, storing most of the dietary fat instead of using it as energy. The HP-TDR group got less carbohydrates, and most of it was fructose that must be metabolized in the liver, where some of it could be stored (if liver glycogen is depleted,) resulting in less blood glucose, and their bodies could use more of the available fatty acids as energy. Simple.

In summary, when you consume a lot of carbohydrates and have high blood glucose levels, glucose is prioritized as the primary energy source, and **fat metabolism is significantly reduced due to insulin-mediated suppression of fat oxidation and stimulation of glucose storage.**

When carbohydrates are reduced, and blood sugar levels do not rise as much, the body can better utilize and oxidize fatty acids for energy.

*“Based on the 24-hour respiratory exchange ratio, the high-protein eaters burned more body fat all day long.”*



Yes, the HP-TDR group consumed less carbohydrates, which meant less blood glucose that could shut down the use of fatty acids, as glucose metabolism is prioritized as it is extremely toxic and damages our soft tissues. So, the less carbohydrates you consume, the more the body can rely on its natural energy source, as in using fatty acids, whether they come from food or from your body fat. So, this has nothing to do with protein and its function, it has to do with the change of macronutrient ratios, as in lowering carbohydrates.

*“When the researchers ran the energy balance math, the high-protein group showed a slightly negative energy balance (-18 calories). The normal-protein group showed a moderately positive energy balance (+92 calories). So that’s a 110-calorie difference between the two groups.”*

Again, the CON group consumed way too much carbohydrates, effectively shutting down the use of fatty acids as energy. And a slightly negative energy balance in the HP-TDR group could be from energy maintenance miscalculation, the added toxic load and energy metabolism from overloaded organs, or all of it.

*“Bill Campbell, Ph.D., makes this important note: “What’s essentially happening here is that you’re getting a calorie-deficit-like effect without actually reducing your calories. It’s occurring by manipulating daily protein intake.”*

Bill Campbell is a complete uneducated moron. Please stop quoting him and embarrassing yourselves.

Again, the results from this study are totally irrelevant as they did not account for changes of other nutrients nor the very important toxic load and the impact on our organs and detoxification mechanisms.

## How to Use This Info

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*“Eat a high-protein diet if you’re not already doing it. Remember, the study participants above were normal-weight folks who bumped their protein up to 211 grams a day.”*

No, they did not bump their protein to 211 grams a day, as it was solely from soy protein. In soy products, you might be able to absorb 70 to 80% in the small intestine. And of those 70-80%, only 50 to 60 % can be converted into usable amino acids. In a refined isolated protein powder where most of the fiber has been removed and perhaps a small amount of antinutrients has been destroyed, the absorption might rise to 90%, however, the conversion rate into usable amino-acids is still in the 60% range.

70-80% of soy protein can be digested and absorbed in the gut.

50-60% of absorbed soy protein can be converted into usable amino acids.

So, at best, they did absorb about  $(211 \times 0.9)$  190 grams, yielding in  $(190 \times 0.6)$  117 grams of “usable” protein. 117 grams is a long way from 211 grams. And a perfect example why you should not consume plant-derived slave sludge.

*“Also, I’d love to see this study repeated with a better-quality protein source for the high-protein group. I mean, it’s like they chose the least-good protein (soy) they possibly could. They must’ve been on a tight budget because soy is generic dog food protein.”*

Yes, this was the only sensible thing you said in this whole article, Chris — except that I would never feed my dogs anything plant-based such as soy, as that is animal abuse. Yet, you use this abysmal study as material for an article where you try to sell your own protein powder. Shameful!

To conclude, this study was a complete waste of time as protein metabolism and a possible impact on energy metabolism was concerned. The diet setup was an utter mess, as they did not understand such simple concepts as bioavailability, bioconversion, the toxic load, nor how the body expel inorganic compounds and toxins, including detoxification — all essential processes that require a lot of nutrients and energy.

With that in mind, their results were most likely an energy increase from these processes, much more so than the metabolic increase of a higher protein load. Still, we do know that protein has a thermogenic effect, but this study shed no light on how much it is, or what difference it can make.

Also, these silly things do not matter. What matters is that you follow our natural species-appropriate diet, which is the only way to get all essential nutrients in a fully bioavailable format, while minimizing the toxic load.

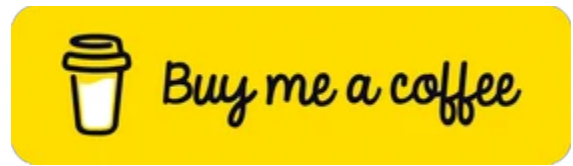
If you need help with any kind of health problems or transitioning from your current way of eating to our natural species-appropriate, species-specific way of eating, I’m available for both coaching and consultation.

## **Coaching and Consultation**

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